

3. ~~(ONCE AMENDED) A switching regulator according to claim 1, wherein the switching regulator further comprises an operation stop circuit that stops a conversion operation of the switching regulator in a case where the main switch and the synchronous switch are simultaneously turned on.~~

4. (ONCE AMENDED) A switching regulator according to claim 1, wherein the detection circuit monitors at least one of the main switch and the synchronous switch.

5. (ONCE AMENDED) A switching regulator according to claim 1, wherein the detection circuit monitors a direction of a current conducting through the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

6. (ONCE AMENDED) A switching regulator according to claim 1, wherein the detection circuit monitors a magnitude of a current conducting through the main switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

7. (ONCE AMENDED) A switching regulator according to claim 1, wherein the detection circuit monitors a driving signal that drives the main switch and the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

8. ~~(ONCE AMENDED) A switching regulator, comprising:  
a main switch;  
a synchronous switch where the main switch and the synchronous switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted; and  
a switching control circuit, that controls the main switch and the synchronous switch, comprising  
a detection circuit that detects a state that the main switch and the synchronous switch are simultaneously turned on.~~

9. ~~(ONCE AMENDED) A switching regulator according to claim 8, wherein the switching regulator further comprises detection result output that outputs a detection result of the~~

~~detection circuit.~~

5.5.1  
10. (ONCE AMENDED) A switching regulator according to claim 8, wherein the switching regulator further comprises an operation stop circuit that stops a conversion operation of the switching regulator in a case where the main switch and the synchronous switch are simultaneously turned on.

11. (ONCE AMENDED) A switching regulator according to claim 8, wherein the detection circuit monitors at least one of the main switch and the synchronous switch.

12. (ONCE AMENDED) A switching regulator according to claim 8, wherein the detection circuit monitors a direction of a current conducting through the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

13. (ONCE AMENDED) A switching regulator according to claim 8, wherein the detection circuit monitors a magnitude of a current conducting through the main switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

14. (ONCE AMENDED) A switching regulator according to claim 8, wherein the detection circuit monitors a driving signal that drives the main switch and the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

15. (ONCE AMENDED) A monitor circuit for a switching regulator, comprising a main switch; and a synchronous switch, both of which are alternately turned on so that a voltage of a DC electric power is transformed and outputted, the monitor circuit comprising a detection circuit that detects a state that the main switch and the synchronous rectifying switch are simultaneously turned on.

16. (ONCE AMENDED) A monitor circuit according to claim 15, wherein the monitor circuit further comprises a detection result output that outputs a detection result of the detection circuit.

5ab1  
C1

~~17. (ONCE AMENDED) A monitor circuit according to claim 15, wherein the monitor circuit further comprises an operation stop circuit that stops a conversion operation of the switching regulator in a case where the main switch and the synchronous switch are simultaneously turned on.~~

18. (ONCE AMENDED) A monitor circuit according to claim 15, wherein the detection circuit monitors at least one of the main switch and the synchronous switch.

19. (ONCE AMENDED) A monitor circuit according to claim 15, wherein the detection circuit monitors a direction of a current conducting through the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

20. (ONCE AMENDED) A monitor circuit according to claim 15, wherein the detection circuit monitors a magnitude of a current conducting through the main switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

21. (ONCE AMENDED) A monitor circuit according to claim 15, wherein the detection circuit monitors a driving signal that drives the main switch and the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

22. (ONCE AMENDED) An electronic equipment, comprising:  
a switching regulator;  
a main switch;  
a synchronous switch, where the main switch and the synchronous switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted; and  
a detection circuit that detects when the main switch and the synchronous switch are simultaneously turned on, wherein the electronic equipment is operative with an electronic power from the switching regulator.

23. (ONCE AMENDED) An electronic equipment according to claim 22, wherein the electronic equipment further comprises a display unit that displays that the main switch and the synchronous switch are simultaneously turned on.

24. (ONCE AMENDED) An electronic equipment according to claim 22, wherein the electronic equipment further comprises an operation stop circuit that stops a conversion operation of the switching regulator in a case where the main switch and the synchronous switch are simultaneously turned on.

25. (ONCE AMENDED) An electronic equipment according to claim 22, wherein the detection circuit monitors at least one of the main switch and the synchronous switch.

26. (ONCE AMENDED) An electronic equipment according to claim 22, wherein the detection circuit monitors a direction of a current conducting through the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

27. (ONCE AMENDED) An electronic equipment according to claim 22, wherein the detection circuit monitors a magnitude of a current conducting through the main switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

28. (ONCE AMENDED) An electronic equipment according to claim 22, wherein the detection circuit monitors a driving signal that drives the main switch and the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

29. (ONCE AMENDED) A method of monitoring a switching regulator, comprising:  
turning on a main switch;  
turning on a synchronous switch, wherein the main switch and the synchronous switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted;  
and

detecting a state that the main switch and the synchronous rectifying switch are simultaneously turned on is detected.

30. (ONCE AMENDED) A method of monitoring a switching regulator according to claim 29, further comprising displaying in accordance with the detecting, that the main switch and the synchronous switch are simultaneously turned on.

~~31. (ONCE AMENDED) A method of monitoring a switching regulator according to claim 29, wherein a conversion operation of the switching regulator is stopped in accordance with the detecting.~~

32. (ONCE AMENDED) A method of monitoring a switching regulator according to claim 29, wherein the detecting monitors at least one of the main switch and the synchronous switch.

33. (ONCE AMENDED) A method of monitoring a switching regulator according to claim 29, wherein the detecting monitors a direction of a current conducting through the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

34. (ONCE AMENDED) A method of monitoring a switching regulator according to claim 29, wherein the detecting monitors a magnitude of a current conducting through the main switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

35. (ONCE AMENDED) A method of monitoring a switching regulator according to claim 29, wherein the detecting monitors a driving signal driving the main switch and the synchronous switch to detect a state that the main switch and the synchronous switch are simultaneously turned on.

36. (ONCE AMENDED) A switching regulator, comprising:  
a first switch;  
an inductor which is connected in series with the first switch;  
a second switch disposed between a connecting point of the first switch with the inductor and a ground point, in which the first switch and the second switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted; and  
a detection circuit that detects a state that the first switch and the second switch are simultaneously turned on.

Sub C1

37. (ONCE AMENDED) A switching regulator control circuit, comprising:  
a first switch connected in series to an inductor;  
a second switch disposed between a connecting point of the first switch with the inductor and a ground point where the first switch and the second switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted; and  
a detection circuit that detects when the first switch and the second switch are simultaneously turned on.

Dep. Cont.

38. (ONCE AMENDED) A monitor circuit for a switching regulator control circuit, comprising:  
a first switch connected in series to an inductor;  
a second switch disposed between a connecting point of the first switch with the inductor and a ground point where the first switch and the second switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted; and  
a detection circuit that detects when the first switch and the second switch are simultaneously turned on.

39. (ONCE AMENDED) An electronic equipment, comprising:  
a switching regulator, comprising  
a first switch;  
an inductor which is connected in series with the first switch;  
a second switch disposed between a connecting point of the first switch with the inductor and a ground point, in which the first switch and the second switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted; and  
a detection circuit that detects a state that the first switch and the second switch are simultaneously turned on, wherein the electronic equipment is operative with an electronic power from the DC-DC converter.

40. (ONCE AMENDED) A method of monitoring a switching regulator, comprising:  
turning on a first switch and an inductor which are connected in series; and  
turning on a second switch disposed between a connecting point of the first switch with the inductor and a ground point, wherein the first switch and the second switch are alternately turned on so that a voltage of a DC electric power is transformed and outputted, and a state that